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Appln. No. 10/092,376
Reply to Office Action dated 8/30/2004

AMENDMENTS TO THE CLAIMS

This Listing of Claims will replace all prior versions, listing, of claims in the specification.

LISTING OF CLAIMS:

Claims 1-7 (canceled).

Claim 8 (original) A method of recovering useful data from a video packet that has been corrupted, the method comprising:

receiving the video packet;

ending without recovering data when corruption is detected in a video packet header of the video packet;

ending without recovering data when corruption is detected in a DC portion of the video packet;

ending without recovering data when corruption is detected in a motion vector portion of the video packet;

initiating decoding of the video packet in a forward direction;

maintaining a first count of a number of macroblocks decoded without error in the forward direction;

storing codewords decoded in the forward direction;

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storing a first bit location when an error is first detected in the forward directed;

initiating decoding of the video packet in a reverse direction;

maintaining a second count of a number of macroblocks decoded without error in the reverse direction;

storing codewords decoded in the reverse direction;

storing a second bit location when an error is first detected in the reverse direction;

determining if there is an overlapping region, where the overlapping region corresponds to a region identified in both the forward direction and in the reverse direction as having an error;

if there is an overlapping region, discarding the data in the overlapping region and using the data in a remaining portion of the video packet;

and

if there is no overlapping region, discarding the data between a first backtracking amount ahead of the first error location in the forward direction and a second backtracking amount behind the second error location in the first location, and recovering the remaining portion of the video packet.

Claim 9 (original) The method as defined in Claim 8, wherein the first error location and the second error location correspond to bit locations.

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Claim 10 (original) The method as defined in Claim 8, wherein the first error location and the second error location correspond to macroblock boundaries.

Claim 11 (original) The method as defined in Claim 8, wherein the first backtracking amount and the second backtracking amount are each to a next valid macroblock boundary.

Claim 12 (original) The method as defined in Claim 8, wherein the first backtracking amount and the second backtracking amount are about 90 bits.

Claim 13 (original) The method as defined in Claim 8, further comprising discarding recovered data from a corrupted video packet that corresponds to an intra-coded macroblock.

Claim 14 (original) The method as defined in Claim 8, further comprising:
determining whether AC prediction was disabled by the encoder;
using a recovered intra-coded macroblock if the intra-coded macroblock is recovered from a portion of the video packet that is ahead of a DC marker in the forward direction, where the video packet was encoded with AC prediction disabled; and

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otherwise discarding recovered data corresponding to an intra-coded macroblock.

Claim 15 (original) The method as defined in Claim 8, further comprising using recovered data corresponding to a first intra-coded macroblock only if no other intra-coded macroblock exists to the immediate left of the first intra-coded macroblock and no other intra-coded macroblock exists immediately above the first intra-coded macroblock in the image.

Claim 16 (original) The method as defined in Claim 8, further comprising concealing errors with gray pixels for portions of the video packet that were not recoverable.

Claim 17 (original) A method for recovering data in a corrupted video packet comprising:

inspecting the video packet to determine whether the video packet was encoded with data partitioning enabled;
determining whether an error exists ahead of a motion marker of the video packet; and

decoding at least a portion of the data in the corrupted video packet ahead of the motion marker when the video packet was encoded with data

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partitioning enabled and where the error does not exist ahead of the motion marker.

Claim 18 (original) The method as defined in Claim 17, wherein the determining whether the error exists ahead of the motion marker further comprises:

predicting a location for the motion marker;

detecting the motion marker;

comparing an actual location of the motion marker to the predicted location of the motion marker;

determining that the error exists behind the motion marker when the actual location and the predicted location match; and

determining that the error exists ahead of the motion marker when the actual location and the predicted location do not match.

Claim 19 (original) The method as defined in Claim 17, wherein the portion of the data decoded includes decoding of motion vectors.

Claim 20 (original) The method as defined in Claim 17, wherein the portion of the data decoded includes decoding of not-coded macroblock flags.

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Claim 21 (original) The method as defined in Claim 17, wherein the portion of the data decoded includes decoding of luminance (DC) information.